

Cytomegalovirus (CMV)

Disease Fact Sheet Series

What is *Cytomegalovirus* infection?

Cytomegalovirus (CMV) is a common viral infection that rarely causes disease in healthy individuals. When it does cause disease, the symptoms vary depending on the patient's age and immune status.

Who gets CMV infection?

In the United States, approximately 1% of newborns are infected with CMV while growing in their mother's womb (congenital CMV infection). Many newborns however, will acquire CMV infection during delivery by passage through an infected birth canal or after birth through infected breast milk (perinatal CMV infection). Children, especially those attending day-care centers, who have not previously been infected with CMV, may become infected during the toddler or preschool years. Most people will have been infected with CMV by the time they reach puberty.

How is CMV spread?

CMV is excreted in urine, saliva, breast milk, cervical secretions and semen of infected individuals, even if the infected person has never experienced clinical symptoms. CMV may also be transmitted through blood transfusions, and through bone marrow, organ and tissue transplants from donors infected with CMV. CMV is not spread by casual contact with infected persons. Transmission requires repeated prolonged contact with infected items.

What are the signs and symptoms of CMV infection?

While most infants with congenital CMV infection do not show symptoms at birth, some will develop psychomotor, hearing, or dental abnormalities over the first few years of their life. Prognosis for infants with profound congenital CMV infection is poor and survivors may exhibit mental retardation, deficiencies in coordination of muscle movements, hearing losses, and chronic liver disease.

Infants who become infected at birth or shortly after birth from cervical secretions or breast milk from CMV-infected mothers usually do not develop symptoms.

Healthy adolescents and adults who become infected will usually remain well or have a mild, nonspecific illness. Occasionally CMV infection may cause a mononucleosis-like syndrome with fever, fatigue, swollen lymph nodes and sore throat. Persons with a weakened immune system may experience the most severe symptoms including pneumonia, and inflammation of the liver and retina of the eye.

(Over)

How soon after exposure to CMV do the symptoms appear?

Most individuals with CMV infections do not become ill. When symptoms do occur, they begin 3-16 weeks following a transfusion with infected blood, an organ or tissue transplant from an infected donor, or for infections acquired during birth. The time for symptoms to appear following exposure to infected urine, saliva, breast milk, semen and cervical secretions is unknown.

Does past infection with CMV make a person immune?

Once infected, an individual probably carries the virus for life. CMV has the capacity to remain latent in the body after a first infection. However, when an infected person's immunity is weakened, as occurs following organ or tissue transplants or with certain diseases like HIV infection, CMV infection can reoccur.

How long is a person able to spread the virus?

Virus is excreted in urine and saliva for many months and may occasionally be excreted for years following the first infection.

What is the treatment for CMV infection?

There is no specific treatment for CMV infection.

How can CMV infection be prevented?

Avoiding the use of transplant organs or tissue from infected donors to non-infected recipients can prevent CMV infection. Transmission of CMV by blood transfusion has been virtually eliminated by the use of non-CMV-infected donors or by applying techniques that remove CMV from the donor blood. Similarly, pasteurization or freezing of donated human milk has reduced the likelihood of CMV transmission through breast-feeding. Thorough hand washing following contact with urine, and saliva from young children, especially those who attend day care centers is recommended.